

**WE CLAIM AS OUR INVENTION:**

1. An x-ray diagnostic apparatus comprising:  
an x-ray source that emits x-rays;  
an x-ray detector disposed such that said x-rays are incident thereon after passing through a subject, said x-ray detector acquiring a plurality of x-ray images formed by the x-rays incident thereon and converting said plurality of x-ray images into an electrical signal sequence;  
an imaging system supplied with said electrical signal sequence for processing said electrical signal sequence to form video signals, said imaging system comprising an edge detector for detecting edges in individual x-ray images in said plurality of x-ray images and a filter for filtering said individual x-ray images along the edges detected by said edge detector, to generate said video signals; and  
a playback device supplied with said video signals.
2. An x-ray diagnostic apparatus as claimed in claim 1 wherein each of said individual x-ray images is composed of a plurality of pixels, each having a pixel value, and wherein said filter forms an average of a number of said pixel values, less than said plurality of pixels.
3. An x-ray diagnostic apparatus as claimed in claim 2 wherein said filter forms said average using a directed mask that causes said averaging to ensue along a direction set by said directed mask.

4. An x-ray diagnostic apparatus as claimed in claim 3 wherein said edge detector comprises a variance measurement unit for making a variance measurement of said pixel values in each of said x-ray images, and a unit for determining a minimum of said variance measurement, said minimum determining said direction to be set by said directed mask.

5. An x-ray diagnostic apparatus as claimed in claim 4 wherein said edge detector further comprises an interpolator for interpolating pixel values of a pixel raster in each of said x-ray images to generate a sub-pixel raster in said direction.

6. An x-ray diagnostic apparatus as claimed in claim 5 wherein said variance measurement unit forms said variance over a selected number of pixels, less than said plurality of pixels.

7. An x-ray diagnostic apparatus as claimed in claim 6 wherein said filter is a low-pass filter and wherein said direction is determined by high interpolation of said pixel values.